DEPARTMENT OF ENERGY
OFFICE OF ENVIRONMENTAL MANAGEMENT

FY 2001 – 2005 MULTIYEAR PROGRAM PLAN

AND

FY 2001 ANNUAL PERFORMANCE PLAN

GUIDANCE

September 1, 2000

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GENERAL GUIDANCE

Objective

The objective of the multiyear planning process is to provide a structured approach to program development and planning, which is driven by user input and facilitates user involvement, while meeting the needs of the Department of Energy (DOE) budget formulation process. In the Office of Science and Technology (OST), the multiyear planning process results in a former Multiyear Program Plan (MYPP). The MYPP consists of a long-term plan for the Focus Area, and a more detailed Annual Performance Plan (APP) that explains the expected performance for each program for the current fiscal year.

In an effort to streamline the multiyear planning process and eliminate redundant information, the FY 2001 APP will be significantly pared down and will become an addendum to the FY 2001- 2005 MYPP. In tandem, these documents will:

- ? Ensure a well-defined program that meets the users' science and technology needs
- ? Justify Focus Area budgets and schedules for the next five years
- ? Integrate work into the users' schedule and budget
- ? Enable successful deployments
- ? Facilitate subsequent budget development activities
- ? Achieve endorsement by Focus Area User Steering Committees

The intended audiences for the document are the users who will concur on/endorse them, and Environmental Management (EM) Headquarters, who will use them as supporting documentation for planning and budget development decisions. Once the documents are rolled up into EM and ultimately Department-wide roadmaps and plans, Congress will evaluate the connectivity to real problems and potential cost/benefits from funding decisions. For congressional purposes, the program plans are provided as planning and execution documents and are not considered the official budget submission.

Each MYPP/APP should not only reflect the individuality and dynamics of the particular Focus Area, but must also contain the basic elements in this guidance to ensure uniformity and comparability. Additionally, it is important for all members of the Focus Area team, including the end users, to be in agreement with this document before it is published. With the integration of the new lead laboratory concept and its formal partnership with the Focus Areas, signatures of the Lead Laboratory Manager and Host Site Assistant Manager for EM are to be included on the Plan cover along with those of the Field Focus Area Manager, Headquarters Focus Area Program Manager, and User Steering Committee Chairperson.

The draft MYPP must be submitted by September 30, 2000, and the draft APP by November 15, 2000. The final signed MYPP, with the APP as an addendum, is due December 1, 2000.

Process

The process of building the MYPP and APP with the end users and the Focus Areas Steering Committees is as important as the resulting document. The MYPP and APP will serve to set the direction of the program for the next five years and contain both the strategy for research and development (R&D) in the problem area and a summary of the technical program being implemented to address the problem.

Per the EM R&D Program Plan, the MYPP/APP process starts with strategic planning or "roadmapping." First, the complete Focus Area work scope (problem area) should be roadmapped at a high level by a team of strategic planners derived from the cleanup project manager community and the science and technology community. Next, the planning should proceed at the project level, with additional roadmapping applied as needed for complex issues. The lowest level of planning is the development of integrated technical responses for each site science and technology need. Integrated technical responses are life-cycle plans encompassing all the R&D activities necessary and sufficient to resolve a need, along with the relationship of those R&D activities to the associated cleanup project's baseline tasks.

Multiyear Program Plan

The MYPPs are a complementary/integrated (not duplicative) collection of individual technical activities (responses) to documented site-identified needs. These needs are identified in user planning documents including:

- Site Science and Technology Needs Statements
- Critical Path Analysis
- Project Baseline Summaries (PBSs)
- EM Disposition Maps

Since all MYPPs are developed concurrently, Focus Areas need to maintain open communications during the MYPP process so appropriate interfaces are reflected in each plan. In following with the Focus Area-centered approach, Focus Areas must include EM Science Program, Crosscut and Accelerated Site Technology Deployment (ASTD) activities that have been integrated into the Focus Areas. The discussions with end users and integration of other OST activities will ensure a focused, well balanced, and justifiable program and the MYPP will document the results of these communications.

The principal use of the MYPP is as a description of the long-term plan for the Focus Area. It describes in some detail, the direction of the program for the next five years. The MYPP will identify and document the goals of the Focus Area in terms of linkage to the end user's needs and schedules, define the proposed accomplishments in terms of problem solutions, and set the budget and performance. The MYPP is the basis for the Science and Technology PBSs and the EM R&D Program Plan, and it establishes performance goals to effectively measure and manage the program. Since the MYPP forms the basis for these critical OST plans, adequate documentation must be included in the MYPP in an auditable form that can support the corporate level baseline and life-cycle

planning activities.

Annual Performance Plan

Each Focus Area program will also be required to submit an Annual Performance Plan (APP) as an addendum to the MYPP at the start of the current execution year. The APP supports the execution and evaluation of the program as compared to the planning and budgeting function supported by the MYPP.

The FY 2001 APP sets the performance goals at the start of the year and tracks progress against this single set of goals. In essence, the APP serves as a Performance Agreement between the OST Headquarters and Field organizations to measure program accomplishments based on established metrics and on linkages to technology end users, and to demonstrate the ability to communicate these metrics and linkages clearly. In FY 2001, Focus Areas should prepare an APP that includes all relevant technologies, including those traditionally done in the past by the Crosscutting programs.

The performance information included in the APP describes the goals of each Focus Area with respect to the EM Corporate Performance Measures and sets performance metrics or schedules in other areas such as demonstrations, Innovative Technology Summary Reports (ITSRs), and peer reviews.

The APP should be written to reflect funding in the initial financial plan and should be revised to show actual budget allocations, as funding becomes available.

MYPP Structure

The FY 2001-2005 MYPP will be structured according to the format below. A detailed description on each section of the MYPP is provided as a reference.

Executive Summary

1. **Program Background/Problem Description**

2. **Vision and Mission**

3. **Goals and Strategies**

4. **Technical Program**
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   - **4.2.** Work Packages
   - **4.3.** Multiyear Funding Table
   - **4.4.** Site Technology Crosswalk Table

Appendix A – Focus Area Key Personnel/Organization

Appendix B – STCG Needs/Multiyear Funding Response Table

Appendix C – Prioritization Process

Appendix D – Major Milestones

Appendix E – Expected Performance

Addendum – FY 2001 Annual Performance Plan

Executive Summary

The Executive Summary should be able to stand on its own without reference to the main document. It should include significant items such as who was involved in planning the Focus Area's multiyear activities; how consensus was built among the parties involved; lead laboratory integration; budget tables; the technical and programmatic strategies; and a summary of the proposed technical program. This section must be consistent with the language in the Appendix A sections of the EM R&D Program Plan unless significant changes are required. If this is the case, clear narrative to that effect, and detailed justification, must be included to ensure knowledgeable review. Budget descriptions must include EM Science Program and all other activities integrated into the Focus Areas.

1. Program Background/Problem Description

This document is to be a high-level description of the problems being addressed by the Focus Areas. This section should cover three main elements:

a) Define the overall problem(s) the Focus Areas is addressing and the size of the problem(s). This section must be consistent with the two-page sections 2.2.x in the EM R&D Program Plan. Reference Life-cycle Planning data (number and cost of PBSs, critical path items, waste streams, and needs), National Academy of Sciences reports, and other significant documents to provide known and accepted data to explain the significance of the problem and the need for R&D work. Relate the EM plan and total cost (spend curve) for remediation as reported in PBSs for addressing the problems. Compliance agreements, consent orders, and reports from oversight/regulatory authorities like the Defense Nuclear Facilities Safety Board, Environmental Protection Agency, Nuclear Regulatory Commission, or states should also be used.

b) Explain why the Focus Area is the right organization to address the problem. Describe the need for the individual Focus Area and why it is the best organization to work on the problem rather than other organizations from within DOE, EM, or other agencies. Include a brief background statement of the technical organization of the Focus Area. Describe how the lead laboratories will be used as an integrated partner in meeting the Focus Area goals and providing technical assistance.

c) Relate what the Focus Area has done for EM and DOE to date. Describe the major accomplishments, not as a list of technologies deployed, but in terms of problems solved. Include the location, magnitude and linkage to site remediation schedules, and, why the solutions to these problems (resulting benefit) are important to EM and DOE. In addition to site PBS information, reference Deployment Fact Sheets and Technology Management System (TMS) information.

4. Vision and Mission

Describe how the Focus Area will approach the problems to be addressed. For example, will the Focus Area use Large Scale Demonstration and Deployment Projects (LSDDP); a research and development, demonstration, testing, and evaluation approach; or technical studies/data. The mission and vision is driven by the five elements of OST's Focus Area-centered approach to technology development: 1) integration; 2) expanding the technical assistance role (lead laboratory); 3) maintaining the highest technical capability; 4) user connection; and 5) communication of science results.

5. Goals and Strategies

Address the goals and strategies required for the Focus Area to be successful. The goals for each Focus Area should reflect the user's expectations for that Focus Area and describe enabling and replacement capabilities to be available in the near term (five years) and the long term that enhance current systems operating or planned in the cleanup mission. Include performance metrics tables in Appendix E for five years. These metrics are to be the Focus Area's best estimate as to the accomplishments for the outyears based on the information included in this plan.

Goals and strategies for the Focus Area should be developed within EM's four major thrusts for science and technology investment: 1) accelerate technology deployment; 2) reduce the cost of EM's major cost centers; 3) meet high priority needs; and 4) reduce EM's technological risk. These Focus Area goals should roll up to and support the OST Corporate Performance Measures. Note that all four strategies may not apply equally in a Focus Area. Set goals for each thrust area that will enable EM to achieve success. Define a set of strategies that will enable the Focus Area to accomplish its goals. Strategies may include plans such as user involvement in the prioritization process, focusing a percentage of available funding on near-term deployments, and ensuring that all project funding is leveraged with the end user to the maximum extent possible.

One of the main objectives of the Focus Areas is to facilitate multiple deployments of innovative technologies. In support of this effort, it is important for each Focus Area to capture the activities they have implemented which have proven successful in accelerating deployments, as well as strategies to be implemented over the next few years to promote additional deployments.

The deployment strategy/tactics will be formatted to include the following:

1) Deployment Successes – A short description of what the Focus area has been doing right (incentives, policies, procedures, application of shoe leather, etc.) or what has been responsible for the large increases in deployment that have occurred over the last three - four years. Focus only on those things that have had the greatest impact. Identify technologies that have become the baseline approach at one or more sites.

2) Deployment Strategy for Outyears – Explain what will be done in the future to make the Focus Area have an even greater impact in terms of deployment. Despite stable budgets, the bar is being raised from just first time use to baseline use and multi-site use of new technology.

3) Deployment Issues – Describe the major stumbling blocks to deployment in each Focus Area's particular problem area. Briefly identify what assistance would be beneficial in addressing these issues.

4) Deployment Focus – Key Problems – Identify major problems that will be solved through deployment opportunities in the FY 2001 – FY 2005 timeframe. Identify problems to be addressed in the outyears, in terms of either elevating a technology/system from first time to baseline use or for multi-site deployment.

Focus Areas also provide a central coordinating and facilitating function within OST, and provide continuity and integration with developers, the vendor community, end users, stakeholders, and regulators throughout the technology maturation process. Show how the Focus Area integrates the technology development process. For instance, show co-funding possibilities, participation in each stage of technology development, or how and when technology hand-offs occur during the technology development cycle. Describe connections externally to other agencies and programs such as the Environmental Protection Agency, the Department of Defense or within the commercial nuclear power industry, where applicable to identify synergies, leveraged funding, and that duplication of efforts is minimized. Show strategies for improving intra-DOE coordination and inter-agency coordination, and the Focus Area's plan for small to large business involvement, e.g., Small Business Innovation Research (SBIR), Strategic Environmental Research and Development Program, (SERDP), other commercialization efforts, etc).

5. Technical Program

5.1. Technical Program Summary

The primary focus is to summarize the Focus Area's planned technical program for the next five years, FY 2001 - 2005 at the product line level. Describe the product line activities over the five-year period in separate paragraphs for each year. The descriptions should be consistent with the style used in the Congressional budget identifying the key themes for each year and the key milestones. Capture the assumptions and recommendations for a national program that addresses all high-priority site needs as developed by the STCGs. Include how the Focus Area-centered approach is implemented in the planning from basic/applied science to deployment and technical assistance. Provide a chart showing the schedule of major site problems being addressed by the Focus Area. See Figure 2 below as an example:

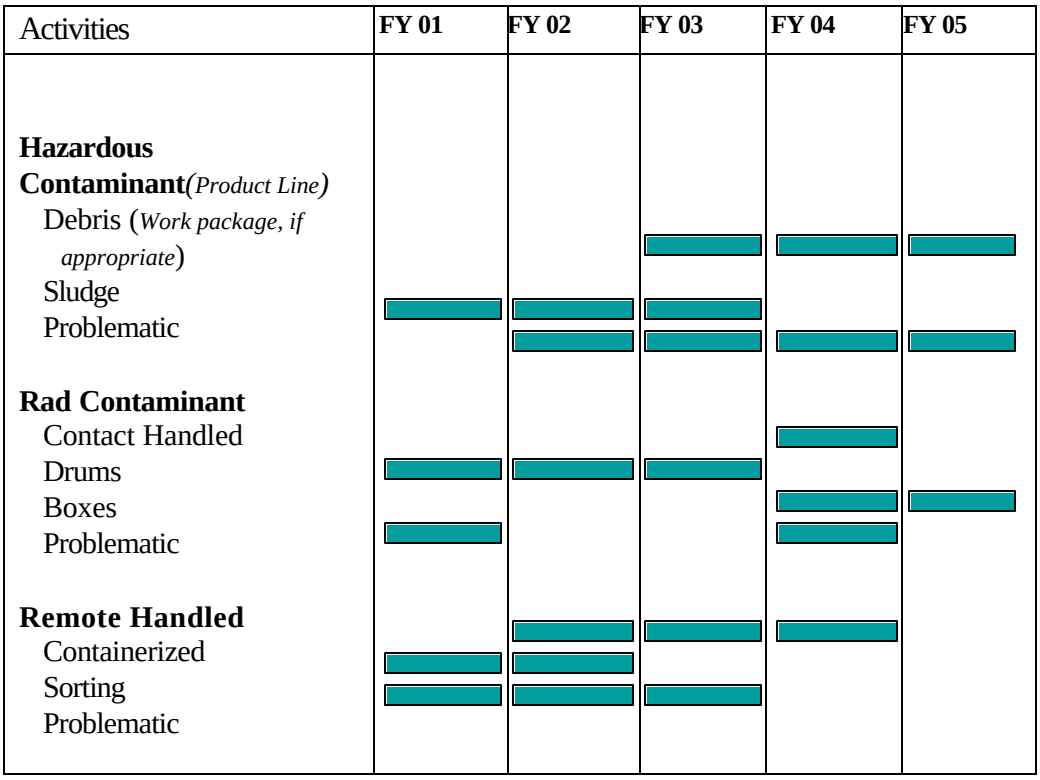

Figure 2. Schedule of Major Site Problems to be Addressed by Focus Areas

Note that OST activities must be prioritized and well-integrated into user projects/programs. Key deliverables must be jointly established with the Focus Area User Steering Committees to provide needed information/technology according to the users schedule and mark the progress of the technology development activities.

5.2. Work Packages

This section should contain a description of all active and future work packages in priority-order with references to the above product lines. Work packages should describe the major site issues to be addressed, schedules, and deliverables. Work packages should be consistent from year-to-year to facilitate traceability. If the direction and content of a work package changes significantly from one year to the next, then it is better to close out the work package, and create a new work package and problem scope with the next sequential number. The amount of funding requested annually should fall within the range of $1M to $5M, and only under special circumstances where the schedule needs to be accelerated to meet changing user needs should this be exceeded; therefore, this is the exception rather than the rule.

Each work package should include all technical tasks required to solve logical groupings of needs including all tasks necessary to completely solve the problem addressed by the work package; problem description; proposed solution target deployment sites; benefit; and schedule. The following is an example of a work package description.

Fuel and Weapons Component Fabrication Facilities:
Tritium Facilities Decommissioning at Mound
This work package will provide for the demonstration and deployment of safer, more efficient and cost effective alternative deactivation and decommissioning technologies emphasizing those, which address problems, associated with tritium-contaminated facilities. Over the course of this project, this cost-shared (with Office of Environmental Restoration) LSDDP will showcase 10 to 15 innovative technologies by demonstration at full scale during early phase of a tritium production facility deactivation and decommissioning at Mound. Successful demonstration of remote characterization, decontamination, and dismantlement technologies will provide mortgage reduction and address human health and safety issues related to cleanup activities in highly radioactive environments. Success indicators are: 20-25 deactivation and decommissioning technologies demonstrated with validated cost and technical performance; 10 deactivation and decommissioning technologies deployed with average 25 percent cost savings; Potential $25M mortgage reduction at Mound after broad deployment.

5.3. Multiyear Funding Table

In the funding table list, by product line, the proposed OST-level work packages, including all integrated activities (Applied Research, Basic Science, Crosscut etc.), along with approved funding for FY 2001 and requested funding for FY 2002 - FY 2005 in thousands. Focus Areas must provide the following: Work Package numbers and exact titles used in Attachment E of FY 2001 Program Execution Guidance (PEG), Prior Year Funding, FY 2001 Congressional Request, FY 2002 from FY 2002 CRB (notate T for Target or P for Planning), FY 2003, FY 2004, and FY 2005.

Funding estimates that support the FY 2001 and FY 2002 Integrated Priority Lists and MYPP work package life-cycle costs must have supporting information. Detailed backup for product line and work package estimates should be available in an auditable form, in order to support the development of the PBS.

3.4. Site Technology Crosswalk Table

This section is an effort to reduce the confusion between the Sites and the Focus Areas in evaluating which work packages with technology activities are planned as “deliverables” to support needs and schedules. This crosswalk table will act as a “handshake” between the Focus Area and the Sites demonstrating that the Site agrees with what the Focus Area plans to develop, demonstrate, and deploy. The result will lead to better Site acceptance of Focus Area products that are fulfilling Site needs. This exercise should emulate the PBS manager “agreement” to needs and associated technical responses in the Integrated Planning Accountability and Budgeting System-Information System (IPABS-IS).

Activities listed should be aimed at the PBS Level either to meet a specific need or an aggregate of needs but with the intent of being recognizable to management at the sites as opposed to extensive, detailed listings. To maintain the multiyear approach of this document, Focus Areas should provide a timeframe (fiscal year(s)) in which the activity will be addressed. The Headquarters Site Team Representatives are currently working a similar crosswalk with the Site Teams and the Headquarters Focus Area leads which should provide a resource for this section. Ultimately, a single crosswalk will be used by all parties and be reflected in the MYPP. The following example and format should be followed.

Crosswalk of Site Needs/Activities to Focus Area Assistance

Site Cleanup Needs and Activities	Focus Area Assistance
Idaho	
Tank closure to meet site agreements to remove HLW from above Snake River	WT-05-01 – enables tank closure compliance agreements to be met (FY01-05) WT-03-01 – meet regulatory requirements for inspection capability (FY01-FY03)
Acceptability of SNF assemblies for storage and disposal	NM02-SNF-01 – develop technologies for deployment for non-destructive assay of SNF (FY02-FY05)
[Site]	
[Activity]	[Work Package and description]

APPENDICES

Appendix A: Focus Area Key Personnel/Organization

Include the names of the personnel that make up the key groups within the Focus Area, including the lead laboratory partner(s). Specifically include the Focus Area or lead laboratory point of contact for coordination of EM Science Program interactions. Briefly describe each group's roles and responsibilities.

Appendix B: STCG Needs/Multiyear Funding Response Table

List, in priority order based upon the Focus Area's prioritization process as described in Appendix C, the needs and PBSs that are addressed by each work package and identify specific technical responses requiring funding to successfully provide a solution to the user's problem. Reference existing OST Technologies, with OST Technology ID numbers, or indicate where new OST Technology ID numbers need to be issued. Each work package may combine multiple needs from multiple sites to define a national problem and then propose a technology system to fully address the problem. The following table format should be used:

FA Priority	STCG Need #	Need Title	PBS #	Tech Response #	Tech Response Title	Work Package #	Work Package Title

Appendix C: Prioritization Process

Describe the Focus Area's prioritization process for needs and criteria used to develop the Focus Area's response to STCG needs.

Appendix D: Major Milestones

List major milestones for each work package for FY 2001 - FY 2005. The table should be organized by product line listing work packages that highlight activities significant to delivering a technological solution to the user's problem. The scheduled planned date should be included. Examples include: demonstrations, technical reports, treatment of real waste, regulatory acceptance, deployments, transfers to users, etc. This information should be presented as shown in the following example. PBS-level and Headquarters-level TTP milestones should be flagged.

	Milestone ID #	Milestone Title	Planned Date
Product Line #1			
Work Package #1	Milestone #1 *	title	date
	Milestone #2	title	date
Work Package #2	Milestone #1	title	date
	Milestone #2 **	title	date
Product Line #2			
Work Package #1	Milestone #1	title	date

* = PBS-level milestone

** = Headquarters-level milestone in TTPs

Appendix E: Expected Performance

List the Focus Area's expected multiyear performance estimates for FY 2001 - FY 2005. The table should be summary-level by product line and Work Package, and should list the number of deployments, demonstrations, Ready for Implementations (RFIs), and transfers from Science.

ADDENDUM: Annual Performance Plan

See attached.